

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for storing a data set having an enabled probe identification component and an associated data component in a buffer, comprising:
storing the data set, comprising the enabled probe identification component and the associated data component, at a current offset if the buffer has sufficient space to store the data set between a current offset and a limit of the buffer and the buffer is not marked as wrapped;
marking the buffer as wrapped, setting the current offset to zero and setting a wrapped offset to zero, if the buffer does not have sufficient space to store the data set between a current offset and a limit of the buffer; and
incrementing the wrapped offset by a stored data set size until there is sufficient space between the current offset and the wrapped offset to store the data set if the buffer is marked as wrapped,
wherein the stored data set size is determined, during buffering, using an enabled probe identification associated with the stored data set,
wherein the enabled probe identification component comprises the enabled probe identification, and
wherein the enabled probe identification identifies an action defined by a tracing function associated with a probe of an instrumented program.
2. (Original) The method of claim 1, further comprising:
storing the data set at the current offset if there is sufficient space between the current offset and the wrapped offset and the buffer is marked as wrapped.
3. (Original) The method of claim 2, further comprising:
incrementing the current offset by a data set size after the data set has been stored.
4. (Original) The method of claim 3, further comprising:
invalidating a buffer space between the current offset and the wrapped offset.

5. (Original) The method of claim 4, wherein the buffer space is invalidated by assigning each word within the buffer space a reserved enabled probe identification denoting a zero-length data component.
6. (Cancelled)
7. (Original) The method of claim 1, further comprising:
invalidating a buffer space between the current offset and the limit of the buffer if the buffer is not wrapped and the buffer does not have sufficient space to store the data set between a current offset and a limit of the buffer.
8. (Cancelled)
9. (Original) The method of claim 1, further comprising:
storing the data set at the current offset if there is sufficient space between the current offset and the wrapped offset, the buffer is marked as wrapped, and the wrapped offset is not equal to the limit of the buffer.
10. (Original) The method of claim 1, further comprising:
determining whether the wrapped offset is equal to the limit of the buffer;
storing the data set at the current offset if there is sufficient space between the current offset and the wrapped offset, the buffer is marked as wrapped, and the wrapped offset is not equal to the limit of the buffer; and
setting the wrapped offset to zero and storing the data set at the current offset if the buffer is marked as wrapped and the wrapped offset is equal to the limit of the buffer.
11. (Cancelled)
12. (Currently Amended) The method of claim [[11]] 1, wherein the tracing function is defined by a consumer.
13. (Currently Amended) The method of claim [[11]] 1, wherein the enabled probe identification is defined on a per-consumer basis.

14. (Original) The method of claim 1, wherein the enabled probe identification associated with the stored data set is used as a reference in to an enabled probe identification-metadata table.
15. (Original) The method of claim 1, wherein the enabled probe identification is associated with metadata.
16. (Original) The method of claim 1, wherein the data set is stored in a kernel-level buffer.
17. (Currently Amended) A system for storing a data set in a buffer, wherein the data set comprises an enabled probe identification component and a data component, ~~in a buffer~~ comprising:
 - a probe configured to obtain data from an instrumented program;
 - a tracing framework configured to associate the probe with an enabled probe identification; and
 - [[a]]~~the~~ buffer configured to store the data set,wherein the enabled probe identification identifies an action defined by a tracing function associated with the probe,
wherein the data is stored in the data component and the enabled probe identification is stored in the enabled probe identification component, and
wherein the buffer is configured to store the data set by:
 - storing the data set, comprising the enabled probe identification component and the data component, at a current offset if the buffer has sufficient space to store the data set between a current offset and a limit of the buffer and the buffer is not marked as wrapped;
 - marking the buffer as wrapped, setting the current offset to zero and setting a wrapped offset to zero, if the buffer does not have sufficient space to store the data set between a current offset and a limit of the buffer; and
 - incrementing the wrapped offset by a stored data set size until there is sufficient space between the current offset and the wrapped offset to store the data set if the buffer is marked as wrapped, wherein the stored data set size is determined, during buffering, using [[an]] the enabled probe identification ~~associated with the stored data set.~~

18. (Currently Amended) The system of claim 17, further comprising:
a consumer defining ~~[[an]]~~ the action, ~~wherein the tracing framework assigns the enabled probe identification to the action.~~
19. (Original) The system of claim 17, further comprising:
an enabled probe identification-metadata table relating the enabled probe identification to metadata.
20. (Original) The system of claim 17, wherein the enabled probe identification is defined with respect to the consumer.